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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/528,202	03/17/2000	David M. Wetchler	10991194-1	3631

22879 7590 06/09/2004

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EXAMINER

GHEE, ASHANTI

ART UNIT PAPER NUMBER

2626

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/528,202

Applicant(s)

WETCHLER ET AL

Examiner

Ashanti Ghee

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 6-15 is/are allowed.
6) ☒ Claim(s) 1-4 is/are rejected.
7) ☒ Claim(s) 5 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the following communication: amendment A filed on 3/5/04.
2. This application has been reconsidered. Claims 1-15 are pending.

Response to Arguments

3. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuma (US Patent No. 5,663,750), as previously cited by the examiner in the office action dated 12/5/03 in view of Iwao (US Patent No. 6,390,617 B1).

Regarding claim 1, Sakuma discloses a method for determining a print image quality capability indicator of an ink-jet hard copy apparatus based on current actual operational conditions of the apparatus, comprising the steps of: storing (storing in memory 21) a plurality of predetermined ink-jet printing operation attributes (amount of ink ejected) related to output print image quality (same image is printed using less ink

reads on output print image quality; col. 4, lines 8-25); monitoring (constantly updates reads on monitoring) during printing (printing) a plurality of ink-jet printing operating characteristics (remaining ink value) corresponding to said operating attributes (predetermined value reads on operating attributes; col. 5, lines 19-32); comparing (compares) said operating characteristics (remaining ink value) to said attributes (amount of ink ejected reads on attributes; col. 5, lines 51-col. 6, lines 1-3); based on comparing (compares) said operating characteristics (remaining ink value) to said attributes (amount of ink ejected), assigning (applied) a print image quality capability indicator (warning in a message region) for each operating characteristics (remaining ink value) representative of current actual operational conditions (only a little ink remains in the ink cartridge reads on representative of current actual operational conditions; col. 5, lines 19-50).

Although Sakuma does not specifically disclose a plurality of predetermined ink-jet printing operation attributes or plural operating characteristics, Iwao discloses a plurality of ink-jet printing operating attributes (col. 5, lines 32-52) and a plurality of ink-jet printing operating characteristics (col. 5, lines 32-52).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made could modify the teachings of Sakuma and Iwao due both references disclosing an ink jet printer for ejecting ink onto a recording medium to provide less heat and high-quality images can be obtained without damage from the heat.

Regarding claim 2, Sakuma discloses the method as set forth in claim 1, the step of storing a plurality of predetermined ink-jet printing attributes related to output print image quality further comprising: determining (determines) a set of operational attributes (predetermined amount) related to print image quality (amount of ink remaining to...print the desired text reads on print image quality) produced by the ink-jet hard copy apparatus (printer in the context of this reference reads on ink-jet hard copy apparatus, col. 11, lines 37-39; col. 9 lines 43-col. 10, lines 1-51), assigning (represented in the context of this reference reads on assigning) a series of scaled values ("A","B") to each of said operational attributes (amount of ink) such that each of the scaled values ("A","B") is representative of a predetermined level (remaining ink) of performance of each of the respective operational attributes (amount of ink), and storing (stored) a look-up table (non-volatile memory 21) wherein a correlated scaled value ("B") is selected based on the current actual operating conditions (remaining ink reads on current actual operating conditions; col. 8, lines 34-58).

Regarding claim 3, Sakuma discloses the method as set forth in claim 2, the step of comparing said operating characteristics to said attributes further comprising: selecting for a current operational attribute of the ink-jet hard copy apparatus the scaled value representative of a predetermined level of performance indicative of a current operational condition (col. 8, lines 34-58).

Regarding claim 4, Sakuma discloses the method as set forth in claim 3, further comprising normalizing each selected scaled value to a common standard.

Allowable Subject Matter

6. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 6-15 are allowable over the prior art of record.

8. The following is an examiner's statement of reasons for allowance: Claims 6-15 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches a computerized method for selecting a print mode for an ink-jet hard copy apparatus that is comprised to select a print mode for the next subsequent printing operation based on the comparison of a function value to a preselected print image quality value that is indicative of the quality of a print image output and encompassing all other limitations stated in the independent claims, respectively, as set forth in Claims 6, 9, and 14 including all of the features recited therein.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tobita et al. (US Patent No. 6,618,159 B1) discloses a method of switching print modes of a printing device.

Ono et al. (US Patent No. 5,943,068) discloses a printer capable of printing in an appropriate print mode.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashanti Ghee whose telephone number is (703) 306-3443. The examiner can normally be reached on Mon-Thurs and alt. Fri. (7-4PM).

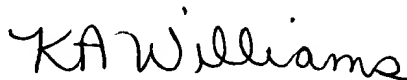
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AG
May 17, 2004

Ashanti Ghee
Examiner
Art Unit 2626



KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER